

PROJECT INFO

Job Name:	Lot F - North SW
Company:	Tapani
Contact:	
Job Type:	New Station
Water Type/Source:	Stormwater
Import/Domestic:	Import Acceptable



PACKAGE/STARTUP

Offering:	Complete System
Mechanical:	All by Romtec Utilities
Pumps:	By Romtec Utilities
Control Panel:	By Romtec Utilities
Generator:	By Romtec Utilities
Advisor/Startup:	Mechanical & Electrical
Turnkey:	No

DESIGN CRITERIA - SWC12D-00-T0600-4000x20-14D-43-0G

FLOW RATE

Peak Inflow:	8300	GPM
Pumping Rate:	4150	GPM (of single pump)
Static Head:	20.3	Feet
TDH:	24.2	Feet
TDH Calcs:	RU Calcs	

ACTIVE VOLUME

Max Pump Starts:	20.00	Starts/Hr
Cycle Time:	3.00	Minutes
Active Volume:	3112.50	Gallons
Active Volume:	416.10	Cu Feet
Well Shape:	Round	
Well Diameter:	12	Feet
Well Dimensions:	N/A	N/A
Cross-Section Area:	113.10	Sq Feet
Min. Depth Required:	3.68	Feet
Active Depth:	3.70	Feet

STORAGE VOLUME (if required)

Time:		Minutes
Flow Rate:		GPM
Volume:	0.00	Gallons
Volume:	0.00	Cu. Feet
Min. Depth Required:	0.00	Feet
Storage Depth:		Feet

ON-SITE POWER

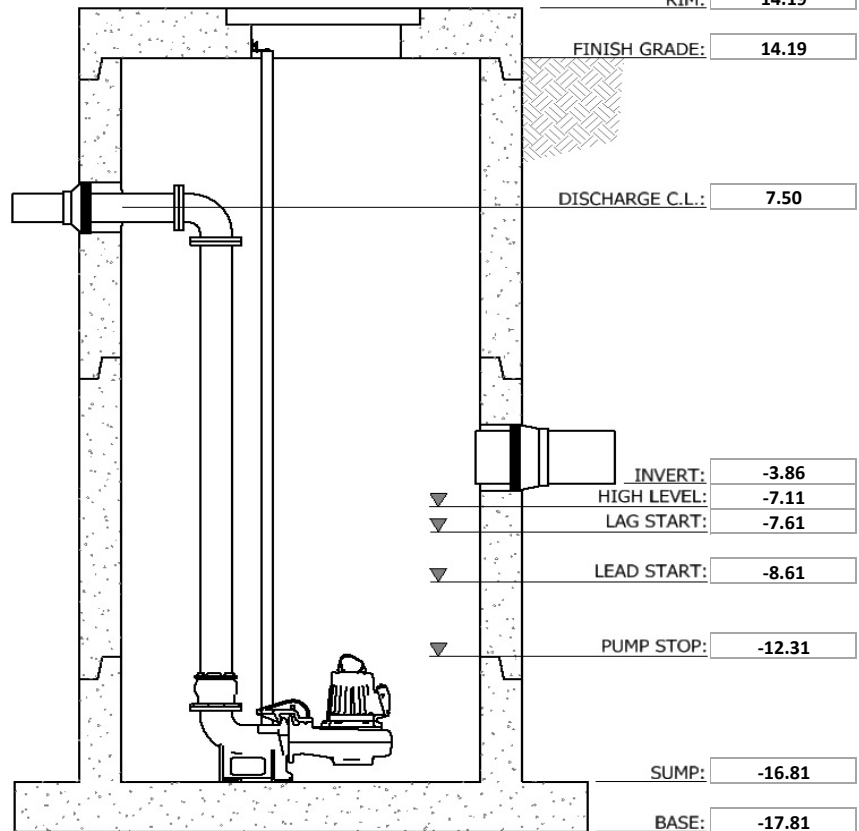
Power:	480V / 3-Phase
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FORCE MAIN

FM Info:	New	Triple FM
Length:	30	Feet
FM Discharge:	8.00	Feet
FM High Point:	8.00	Feet
	(1)	(2)
Nominal ID:	14"	
Type/Rating:	Assumed DI CL52	

INFLUENT PIPING

	(1)	(2)	(3)
Influent Invert:	-3.86		
Influent Size:	24"		
Type:	HDPE (Corr.)		



Note: Image is a preliminary representation of the pumping system. Elevations shown are the primary factors used for sizing the wet well. Backup levels not shown. Additional (or fewer) level settings may be required.

General Specification

- A. The package pump station supplier of the sewer lift station shall be Romtec Utilities. The package pump station supplier shall design and draw the complete lift station including the wet well structure and associated piping and valves along with the control panel and the associated schematics.
- B. The package pump station supplier shall be solely responsible for proper prefabrication, integration, supply, performance, and warranty of all package pump station components delineated in this specification and on the drawings, which shall be used as a guide of the minimum product specifications that shall be met.
- C. The package pump station supplier work shall include designing and supplying the piping, mechanical, and appurtenances within and adjacent to the wet well as a complete, predesigned, packaged pump station as described herein.
- D. The drawings shall be of sufficient detail for the Engineer to review for conformity to the contract. All drawings shall include elevations on the same datum point as in the contract plans.
- E. Romtec Utilities will manufacture and deliver the pump station as described below to the job site for the contractor. A representative of Romtec Utilities will be present the day of the underground installation.
- F. The package pump station supplier is responsible for overseeing all start-up, testing and training procedures.

WET WELL INFORMATION

WET WELL

Material:	Concrete	
Well Diameter:	12	Feet
Well Dimensions:	N/A	N/A
Minimum Barrels:	28.75	Feet
Set Barrels:	29	Feet
Depth (Rim to Floor):	31.00	Feet

WET WELL TOP

Traffic Rating:	H-20 Occasional
Hatch Options:	N/A
Vent Options:	Flush Vent (Cast in top slab)

DISCHARGE PIPING

	(1)	(2)	(3)
Disch. Piping Size:	14"		
Disch. Piping Type:	Ductile Iron		
Disch. Piping Style:	Checks Only		
Lining:	Unlined		
Influent Deflection:	Deflector Panel		

WET WELL BASE

Base:	Flat sump
Lining:	No Lining
QDC:	LL300YU
Elbow:	Integral
Adapter:	RFC A

PUMP INFORMATION

PRIMARY PUMPS

Triplex

Manufacturer:	Ebara
Model:	300DLFMU6454
Impeller Model/Dia:	11.54
Impeller Trim:	Yes
Motor HP:	60 HP
Explosion Proof:	Yes
Voltage/Phase:	460V / 3-Phase
Cable Length:	75
Mix Flush Valve:	N/A

JOCKEY PUMP

Manufacturer:	N/A
Model:	
Impeller Model/Dia:	
Impeller Trim:	
Motor HP:	
Explosion Proof:	
Voltage/Phase:	
Cable Length:	
Mix Flush Valve:	

VAULT/VALVING INFORMATION

VALVE VAULT

	(1)	(2)	(3)
Valve Size:	N/A		
Vault Model:	N/A		
Hatch:			
Piping Type:			
Pressure Gauge:			
Check Options:			
Shut Off Options:			
Options:			
Options:			
Options:			

METER VAULT

	(1)	(2)	(3)
Valve Size:	N/A		
Vault Model:	N/A		
Hatch:			
Piping Type:			
Pressure Gauge:			
Shut Off Options:			
Options:			
Options:			
Options:			
Flow Meter (Readout):			

ELECTRICAL INFORMATION

CONTROL PANEL

Power:	480V / 3-Phase
Controller:	MicroLogix 1400
Primary Sensor:	Pressure Transducer
Secondary Sensor:	4 Floats
Enclosure:	NEMA 3R Stainless Steel
FLA:	258.4
Pump/Sense Wiring:	Direct
Comms:	Autodialer (Cell)
Options:	Soft Starters
Options:	N/A

GENERATOR

Model:	250KW Diesel
Enclosure:	QuietSite II
Transfer Switch:	400A
Options:	24Hr. Fuel Tank
Options:	N/A
Pumps Running:	2

MISCELLANEOUS INFORMATION

CONTROL BUILDING

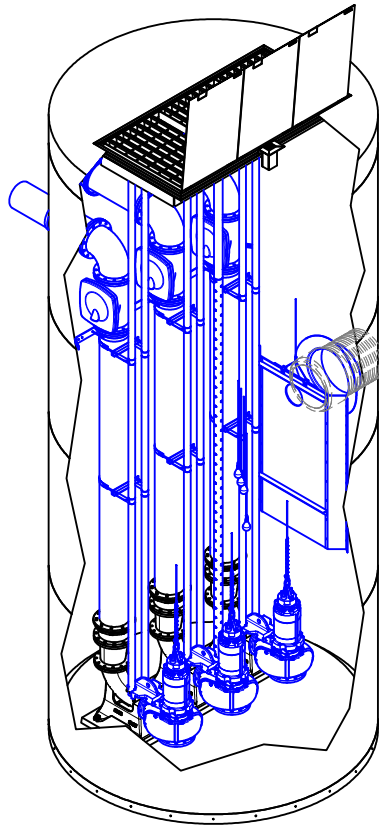
Type:	N/A
Size:	

ODOR CONTROL

Type:	N/A
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CRANE

Crane:	N/A
Crane Base/Winch:	
Crane Coating:	



**12'DIAMETER WET WELL
14"DISCHARGE PIPING
EBARA DLFU PUMPS
14" CHECK VALVES
FOR PRODUCTION**

COLOR LEGEND

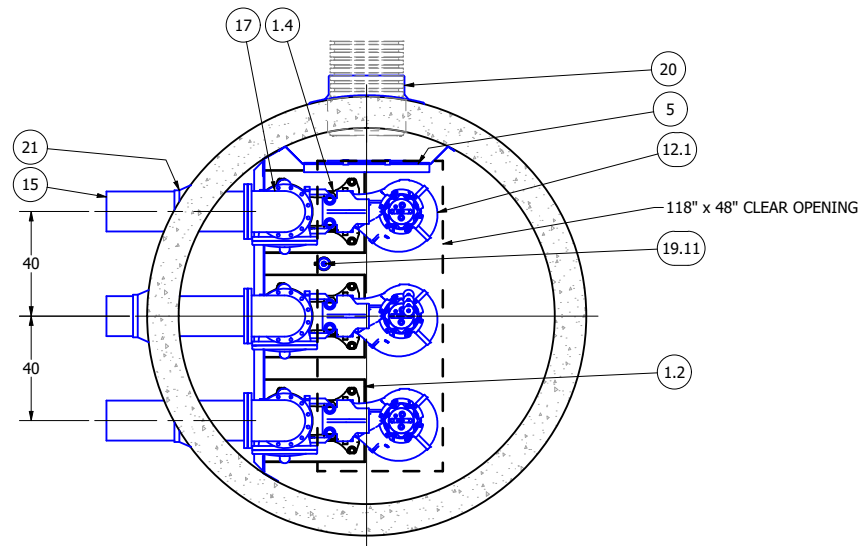
	MAJOR CONCRETE COMPONENTS WITH PRE-INSTALLED COMPONENTS.
	COMPONENTS PRE-ASSEMBLED TO THE EXTENT POSSIBLE AND WILL NEED TO BE FIELD INSTALLED.

NOTE: PRE-ASSEMBLY IS DONE AT ROMTEC UTILITIES' DISCRETION AND MAY CHANGE AT THE TIME OF PRODUCTION.

ALL MATERIALS SHOWN ON THIS SHEET WILL BE SUPPLIED BY ROMTEC UTILITIES AND DELIVERED TO THE SITE AFTER THE HOLE HAS BEEN EXCAVATED AND SHORED. THE CONTRACTOR SHALL SUPPLY A CRANE OF SUFFICIENT SIZE TO LOWER ALL THE CONCRETE PIECES INTO THE HOLE SAFELY. THE CONTRACTOR SHALL INSTALL THE WET WELL (AND VALVE VAULT AND METERING VAULT IF APPLICABLE). ROMTEC UTILITIES WILL PROVIDE A REPRESENTATIVE FOR TECHNICAL ASSISTANCE ON THE DAY OF INSTALLATION TO ANSWER ANY QUESTIONS THAT MAY ARISE. THE CONTRACTOR IS RESPONSIBLE FOR ALL PLUMBING AND ELECTRICAL CONNECTIONS AND INSTALLATION. ITEMS NOTED AS "BY OTHERS" WILL BE PROVIDED AND INSTALLED BY THE CONTRACTOR. ROMTEC UTILITIES WILL NOT INSTALL ANY OF THE COMPONENTS SHOWN ON THIS PAGE.



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PRIMARY SENSOR ELEVATION TABLE

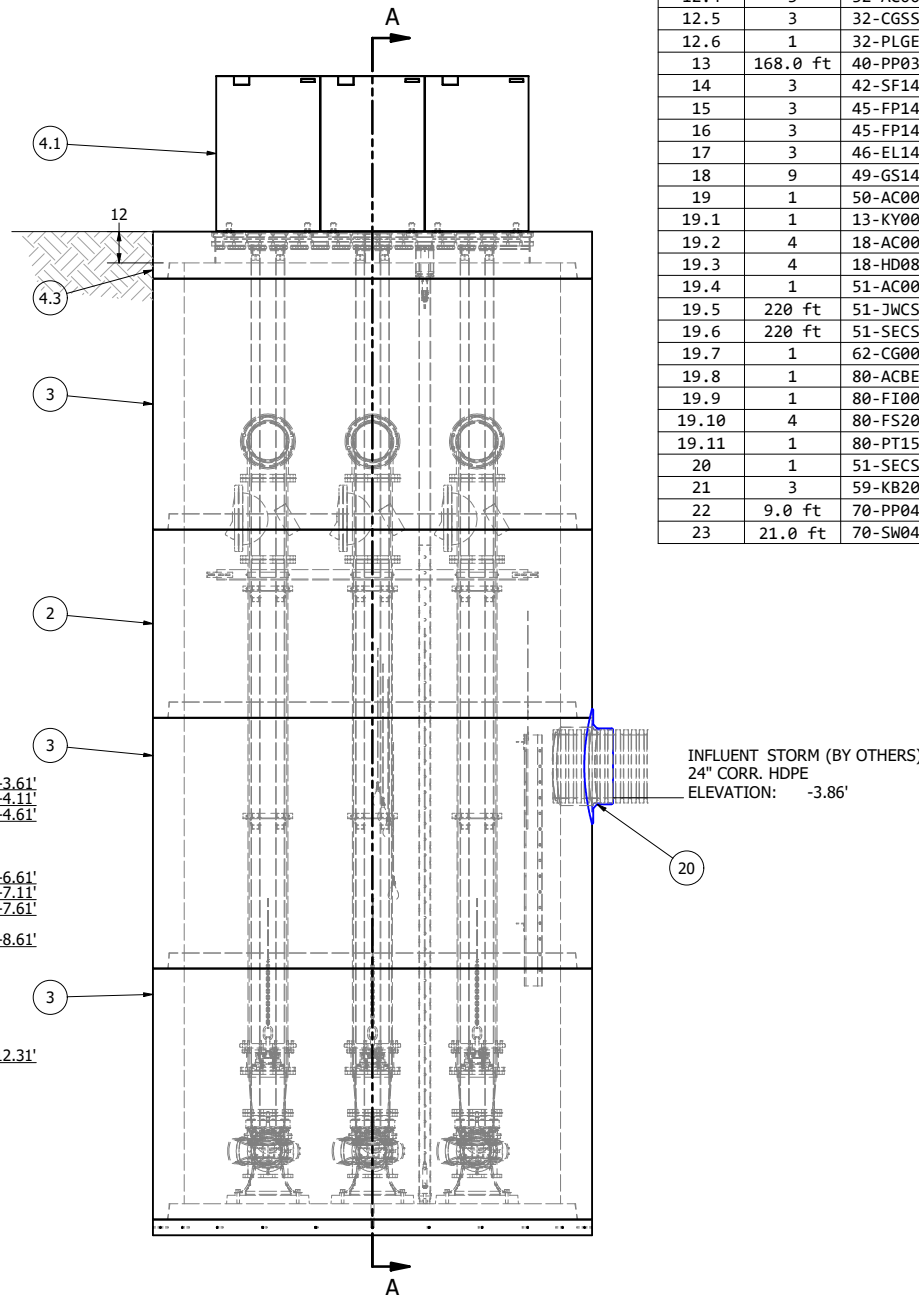
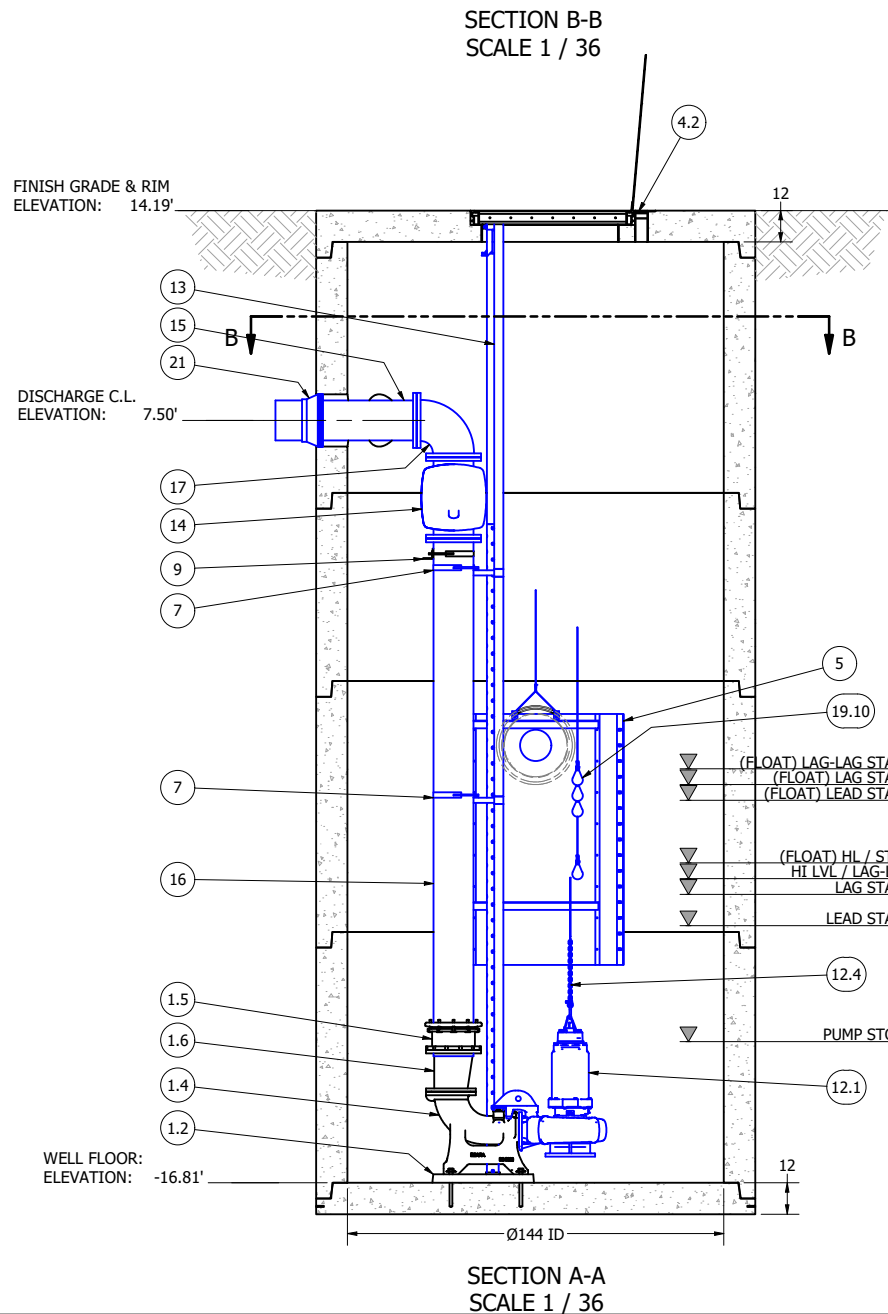
DESCRIPTION	ELEVATION	Δ
INFLUENT INVERT	-3.86'	
HIGH LEVEL ALARM	-7.11'	0.50'
LAG PUMP START	-7.61'	0.50'
LEAD PUMP START	-8.61'	3.70'
PUMP STOP	-12.31'	4.50'
WELL FLOOR	-16.81'	

MISC. ELEVATION TABLE

DESCRIPTION	ELEVATION
LAG-LAG (FLOAT)	-3.61'
LAG START (FLOAT)	-4.11'
LEAD START (FLOAT)	-4.61'
HL/STOP (FLOAT)	-6.61'

PARTS LIST

ITEM	QTY	STOCK NUMBER	DESCRIPTION
1	1	10-CB00000	BASE SLAB ASSEMBLY
1.1	1	10-CB1200CP	BASE - WW - 12ft DIA - FLAT
1.2	3	10-GR99999	PUMP PEDESTAL - GROUT
1.3	3	31-HW00AKS6	ANCHOR KIT - 316SS - DISCHARGE ELBOW
1.4	3	31-QD12LYEB	QDC - 12in - LL300YU - EBARA
1.5	3	44-AD14RMD0	RFCA - 14in - ROMAC - FBEC w SS HARDWARE
1.6	3	48-RD1412DE	REDUCER - DI - 14in x 12in - ECCENTRIC
1.7	3	49-GS120000	GASKET - FLANGE - 12in
2	1	12-CR1272CP	BARREL - 12ft DIA x 6ft H
3	3	12-CR1296CP	BARREL - 12ft DIA x 8ft H
4	1	14-CT000000	TOP SLAB ASSEMBLY
4.1	1	13-HH12HDTE	HATCH - H20 - 12ft - TRIPLEX
4.2	1	13-VT0000AL	VENT - ALUMINUM - FLUSH
4.3	1	14-CT12HDD0	TOP SLAB - 12ft DIA - H20 - DUPLEX
5	1	15-DP100000	DEFLECTOR PANEL ASSEMBLY - 10ft
6	3	17-AC38000B	BOLT KIT - UPPER GUIDE BAR BRACKET
7	6	17-IG0356EB	BRACKET - 316SS - INTERMEDIATE GUIDE - 3in
8	3	17-UG0354EB	BRACKET - 316SS - UPPER GUIDE BAR - 3in
9	1	18-BR000000	BRACKET ASSEMBLY - 316SS - DISCHARGE SUPPORT
10	1	18-BR04SWLO	STILLING WELL - LOWER SUPPORT - 4in
11	1	18-BR04SWUP	STILLING WELL - UPPER SUPPORT - 4in
12	1	30-PU000000	PUMP SHIPPING CRATE
12.1	3	30-99999999	PUMP - EBARA 300DLFU645 - 60HP
12.2	3	30-PUCABL60	PUMP OPTION: LONG CABLES - 75ft - 60HP
12.3	3	30-PUTRIM03	PUMP OPTION: IMPELLER TRIM - 40HP THRU 60HP
12.4	3	32-AC0000EB	LIFTING ASSEMBLY - EBARA (28ft LENGTH)
12.5	3	32-CG55000G	CABLE SUPPORT GRIP - 304SS - 1.5in-1.74in
12.6	1	32-PLGE0000	GRIP EYE UNIT
13	168.0 ft	40-PP0300S6	PIPE - 316SS SCH40 - 3in DIA
14	3	42-SF1400D0	CHECK VALVE - SWING FLEX - 14in
15	3	45-FP140540	SPOOL - DI - 14in DIA x 54in - FLGxPE
16	3	45-FP141980	SPOOL - DI - 14in DIA x 198in - FLGxPE
17	3	46-EL1490DI	ELBOW - DI - 14in x 90deg - FLG x FLG
18	9	49-GS140000	GASKET - FLANGE - 14in
19	1	50-AC000000	WELL SHIPPING CRATE
19.1	1	13-KV000000	HATCH KEY
19.2	4	18-AC00CH00	CABLE HANGER ASSEMBLY - 316SS
19.3	4	18-HD080000	LIFTING CLUTCH - 8 TON
19.4	1	51-AC00NSTB	NEVER SIEZE - TUBE
19.5	220 ft	51-JWCS2120	JOINT WRAP - 12in - CONSEAL CS-212
19.6	220 ft	51-SECS231L	JOINT SEALANT - 2in x 1in - CONSEAL CS-231
19.7	1	62-CG00PT00	CORD GRIP - PRESSURE TRANSDUCER - WEDGE CLAMP
19.8	1	80-ACBELLOW	ANEROID BELLOW
19.9	1	80-FI00PT00	DESSICANT FILTER - PRESSURE TRANSDUCER
19.10	4	80-FS20MSNL	FLOAT - 20m - MS1 - NOLTA
19.11	1	80-PT1500EH	PRESSURE TRANSDUCER - 0-15PSI - 60ft CABLE - E&H
20	1	51-SECS1800	SEALANT - BUCKET - CONSEAL CS-1800
21	3	59-KB201400	KOR-N-SEAL - 20in CORE x 14in PIPE
22	9.0 ft	70-PP0400P4	PIPE - PVC SCH40 - 4in DIA
23	21.0 ft	70-SW0400P4	STILLING WELL - 4in PVC PIPE - PERFORATED



NOTE: ALL DIMENSIONS AND ELEVATIONS SHOWN ARE NOMINAL DIMENSIONS. IT IS THE RESPONSIBILITY OF THE ON-SITE CONTRACTOR OR ROMTEC UTILITIES CUSTOMER (NOT ROMTEC UTILITIES) TO VERIFY THE ACCURACY OF ANY CRITICAL DIMENSIONS OR ELEVATIONS PRIOR TO SETTING OR INSTALLING ANY EQUIPMENT.

VERIFY SCALE
DRAWING SCALE: 1" = 1'-0"
PRINTING SCALE: AS SHOWN

NO.	DATE	REV	DESCRIPTION
2	2/3/2021	1	NEW RIM ELEV, ADJUSTED ALL OTHER ELEVATIONS
1	1-28-21		DESCRIPTION
			REVISION HISTORY

DATE: 12-9-20

ROMTEC UTILITIES
18240 NORTH BANK ROAD
ROSEBURG, OREGON 97470
PHONE: (541) 496-9678
WWW.ROMTECUTILITIES.COM

PROLOGIS MEADOWS
PORTLAND, OR
LOT F NORTH STORM PS
WET WELL ASSEMBLY
COMPONENT DRAWING

2.03 ELECTRICAL PLANS

GENERAL INFORMATION

- ELECTRICAL SERVICE - 480V, 3 PHASE
- PUMPS - (3) 60HP, 460V, 3PH, 77.5 FLA, TRIPLEX CONFIGURATION
- PUMP MODEL - EBARA, 300DLFMU6454
- PRIMARY CONTROLLER - MICROLOGIXS 1400 PLC CONFIGURED FOR TRIPLEX OPERATION
- DEVICE MOUNTING - INNER DOOR
- PANEL MOUNTING - FLOOR MOUNT

LEVEL SENSING

- PRIMARY LEVEL SENSING - PRESSURE TRANSDUCER WIRED FOR INTRINSICALLY SAFE
- MODEL - E&H FMX21
- SECONDARY LEVEL SENSING - (4) FLOATS WIRED FOR INTRINSICALLY SAFE
- MODEL - NOLTA MS1

PUMP CONFIGURATION

- MANUFACTURER - EBARA
- MODEL - 300DLFMU6454
- HP - 60
- NP FLA - 77.5
- TRIPLEX
- CABLE DIA. - 1.27

CONTROL PANEL

- NEMA 3R STAINLESS STEEL, 48"H X 60"W X 18"D, 3 POINT LOCKING LATCH
- 12" LEG KIT
- MAIN DISCONNECT CIRCUIT BREAKER W/LOCKOUT PROVISIONS
- PHASE MONITOR RELAY
- TRANSIENT VOLTAGE SURE PROTECTION
- HOA SELECTOR SWITCHES
- RUN & FAULT INDICATOR LIGHTS
- ELAPSED TIME METERS
- SOFT STARTERS
- INNER DOOR MOUNTED DEVICES
- UL LISTED

CONTROL OPTIONS

- ALARM BEACON
- COLOR HMI

COMMUNICATIONS - SEE PAGE 3

- SENSAPHONE SENTINEL PRO
- CELLULAR SERVICE CONTRACT REQUIRED
- ----
- ----

GENERATOR

- MODEL - C250 D6
- 250 KW
- VOLTAGE - 480V, 3PH
- FUEL - DIESEL
- ENCLOSURE - SOUND ATTENUATED II

AUTOMATIC TRANSFER SWITCH

- MODEL - OTEC 400A
- VOLTAGE - 480V, 3PH
- ENCLOSURE - NEMA 3R

ELECTRICAL INSTALLATION RECOMMENDATIONS

THE FOLLOWING INFORMATION IS A RECOMMENDATION ONLY. IT IS THE RESPONSIBILITY OF THE INSTALLING CONTRACTOR TO REVIEW ALL AS BUILT SYSTEM INFORMATION AND MAKE THE INSTALLATION AS PER THE NATIONAL ELECTRICAL CODE (NEC).

INSTALL ALL BRANCH CIRCUIT AND/OR FEEDER OVERCURRENT PROTECTION DEVICES IN ACCORDANCE WITH THE NEC.

TABLE 1

TRIPLEX LIFT STATION CONTROL PANEL (LCP)			
VOLTS	480	LARGEST HP	60
PHASE	3	LARGEST FLA	77.5
FREQUENCY	60 HZ	CPT VA	3000
		TOTAL FLA	258.13

NOTE: LARGEST FLA BASED OFF OF TABLE 430.250 PER NEC ARTICLE 430.6(A)(1).

TABLE 2

RECOMMENDED CONDUIT SIZES				
DEVICE	HP	POWER DIA.	CONTROL DIA.	CONDUIT SIZE
PUMP 1	60	1.27	.49	2 1/2"
PUMP 2	60	1.27	.49	2 1/2"
PUMP 3	60	1.27	.49	2 1/2"
TRANSDUCER			.35	1"
FLOATS			.25	

NOTE: ALL CONDUIT CALCULATION BASED ON RIGID METAL CONDUIT (RMC) @ 40% MAXIMUM FILL AS PER THE 2017 NATIONAL ELECTRICAL CODE.

SIZE ALL CONDUIT IN ACCORDANCE WITH THE NEC, OR AS RECOMMENDED, WHICHEVER IS GREATER.

SPECIAL NOTE:

THE ABOVE INFORMATION IS A PRELIMINARY INFORMATION ONLY. IT IS THE INSTALLING CONTRACTOR'S RESPONSIBILITY TO REFERENCE THE ELECTRICAL INSTALLATION DOCUMENTATION TO VERIFY ALL INFORMATION AND TO CONFIRM THAT THE INSTALLATION MEETS THE REQUIREMENTS OF THE NATIONAL ELECTRICAL CODE AND ANY LOCAL CODE REQUIREMENTS.

PROLOGIS MEADOWS LOT F -
NORTH SW
PORTLAND, OR
ELECTRICAL NOTES
TRIPLEX LIFT STATION

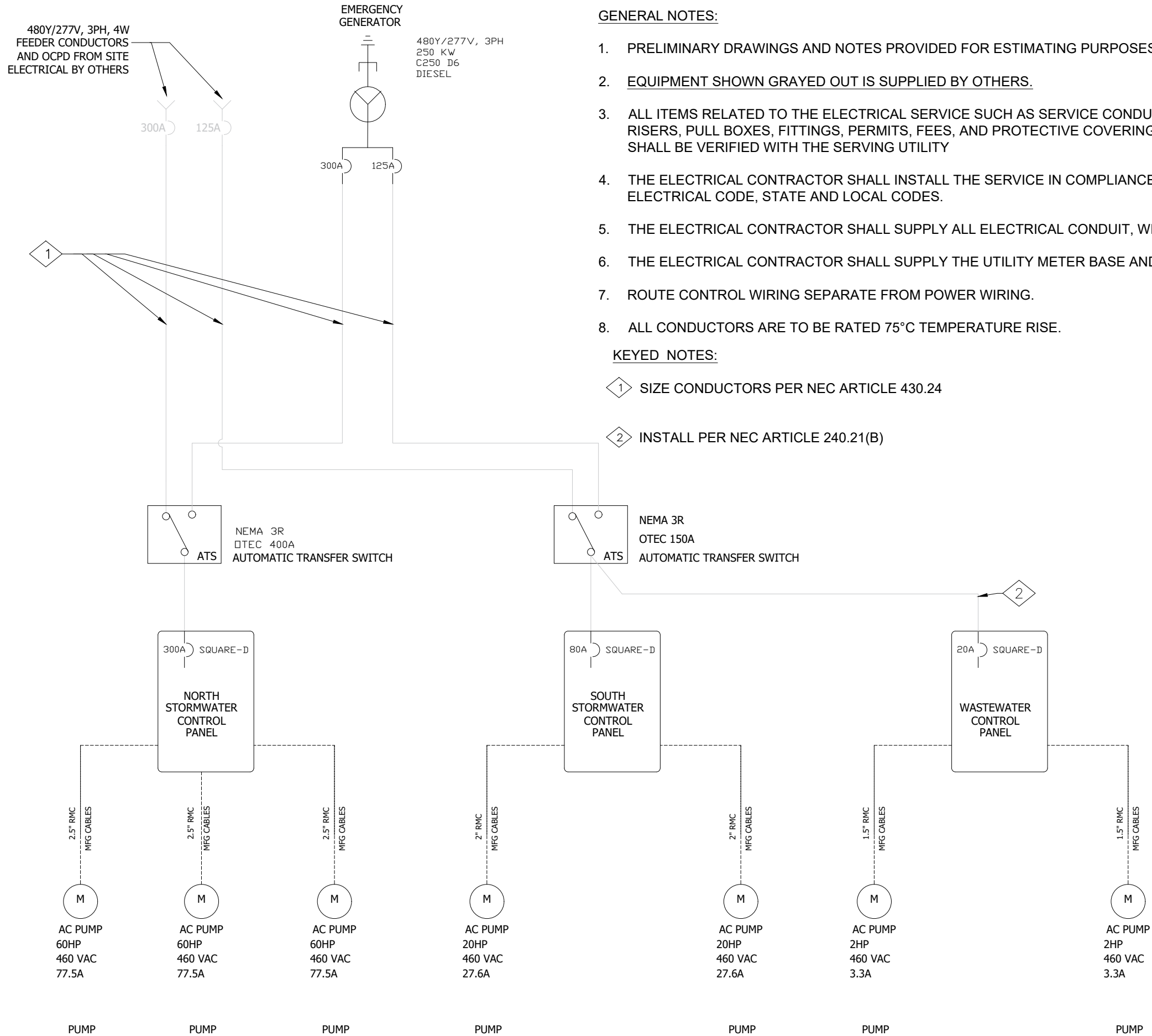
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PROJECT #: E0106D10
DSN: DSN
DIN: DIN
CKD: CKD
DATE: 12/18/2020

REV. DATE DESCRIPTION REVISION HISTORY

ROMTEC UTILITIES
18240 NORTH BANK ROAD
ROSEBURG, OREGON 97470
PHONE: (941) 496-9678
WWW.ROMTECUTILITIES.COM

ELECTRICAL SHEET
1 OF 3



GENERAL NOTES:

1. PRELIMINARY DRAWINGS AND NOTES PROVIDED FOR ESTIMATING PURPOSES ONLY. NOT FOR CONSTRUCTION.
2. EQUIPMENT SHOWN GRAYED OUT IS SUPPLIED BY OTHERS.
3. ALL ITEMS RELATED TO THE ELECTRICAL SERVICE SUCH AS SERVICE CONDUIT, CONDUCTORS, DUCT, PAD MOUNT, RISERS, PULL BOXES, FITTINGS, PERMITS, FEES, AND PROTECTIVE COVERING FROM THE SERVICE POINT LOCATION SHALL BE VERIFIED WITH THE SERVING UTILITY
4. THE ELECTRICAL CONTRACTOR SHALL INSTALL THE SERVICE IN COMPLIANCE WITH THE SERVING UTILITY, NATIONAL ELECTRICAL CODE, STATE AND LOCAL CODES.
5. THE ELECTRICAL CONTRACTOR SHALL SUPPLY ALL ELECTRICAL CONDUIT, WIRE, FASTENERS AND FITTINGS.
6. THE ELECTRICAL CONTRACTOR SHALL SUPPLY THE UTILITY METER BASE AND METHOD OF MAIN SERVICE DISCONNECT.
7. ROUTE CONTROL WIRING SEPARATE FROM POWER WIRING.
8. ALL CONDUCTORS ARE TO BE RATED 75°C TEMPERATURE RISE.

KEYED NOTES:

- 1 SIZE CONDUCTORS PER NEC ARTICLE 430.24
- 2 INSTALL PER NEC ARTICLE 240.21(B)

PROLOGIS MEADOWS LOT F -
NORTH SW
PORTLAND, OR
ELECTRICAL NOTES
TRIPLEXLIFT STATION

ROMTEC UTILITIES
18240 NORTH BANK ROAD
ROSEBURG, OREGON 97470
PHONE: (541) 496-9678
WWW.ROMTECUTILITIES.COM

PROJECT #: E0106D10
DSN:DSN
DRN:DRN
CKD:CKD
DATE:12/18/2020

REV	DATE	DESCRIPTION	BY

ELECTRICAL SHEET
2 OF 3

2.01 SITE LAYOUT

